elee have followed nearly the same path through the center of the country (see Chart I). No. V began in the middle Plateau Region, and No. VIII off the north Pacific Coast; all the other highs originated, or were first seen, to the north of Montana or Lake Superior. No. III was last noted in the middle St. Lawrence Valley, I and VI near Newfoundland, and all the rest near the middle Atlantic Coast.

The lows were much more uniformly distributed over the country than the highs (see Chart II). No. III was first noted off the north Pacific Coast, and VIII off the middle Pacific; IV and VI were first noted in Arizona, and I, II, IX, and X north of the Gulf of Mexico; V, VII, and XI were first noted to the north of Montana. The common locus of nearly all was over or near Newfoundland. Nos. I and III disappeared off or near the middle Atlantic Coast, and IX in the middle St. Lawrence Valley.

Highest temperatures during the third decade of February were recorded during the passage of low No. IX.

High winds of 70 miles per hour at Block Island occurred p. m. of 3d as low No. I passed off the Atlantic Coast. Winds of 60 miles per hour were reported p. m. of 6th from New York as low No. II passed toward the Atlantic. The remaining storms of the month were of slight intensity. As No. II approached the Atlantic the heaviest precipitation of the month was reported, 3.24 inches in twenty-four hours, at Augusta, and 3.10 inches at Tampa, a. m. of the 6th.

The lowest temperature of the third decade of February was reported on the 26th during the passage of high area No. VIII.

Movements of centers of areas of high and low pressure.

Number.	First observed.			Last observed.			Path.		Average velocities.	
	Date.	Lat. N.	Long. W.	Date.	Lat. N.	Long W.	Length.	Duration.	Daily.	Hourly.
High areas.		°	°		°	°	*Miles.*	*Days.*	*Miles.*	*Miles.*
I	1, p.m.	52	94	7, a.m.	52	56	2,270	5.5	413	17.2
II	5, a.m.	54	116	9, p.m.	40	80	2,120	4.5	471	19.6
III	8, a.m.	50	99	12, a.m.	47	71	1,360	4.0	340	14.2
IV	12, p.m.	52	89	14, a.m.	38	73	1,190	1.5	793	33.0
V	16, p.m.	42	119	20, p.m.	41	69	2,630	4.0	658	27.4
VI	19, a.m.	54	109	23, a.m.	48	61	2,240	4.0	560	23.3
VII	22, a.m.	49	111	24, p.m.	37	74	2,320	2.5	929	38.7
VIII	24, p.m.	47	126	28, a.m.	37	78	2,990	3.5	855	35.6
Total							17,120	29.5	5,019	
Mean of 8 tracks							2,140	3.7	627	26.1
Mean of 29.5 days									580	24.2
Low areas.										
I	1, a.m.	32	86	2, p.m.	37	73	830	1.5	548	22.8
II	2, p.m.	38	103	9, a.m.	47	60	3,270	6.5	503	21.0
III	3, p.m.	47	127	8, a.m.	38	82	3,350	4.5	744	31.0
IV	8, a.m.	34	113	13, a.m.	48	56	3,700	5.0	740	30.8
V	10, p.m.	53	113	15, a.m.	49	61	3,210	4.5	713	29.7
VI	13, a.m.	35	113	17, a.m.	49	56	3,530	4.0	882	36.8
VII	14, p.m.	53	118	20, a.m.	45	57	3,210	5.5	584	24.3
VIII	18, p.m.	40	124	22, a.m.	50	56	3,380	3.5	965	40.2
IX	20, p.m.	36	99	23, p.m.	48	73	1,810	3.0	603	25.1
X	22, a.m.	36	91	24, a.m.	47	56	1,970	2.0	987	41.1
XI	23, a.m.	53	111	26, a.m.	45	59	2,990	3.0	998	41.6
Total							31,240	43.0	8,267	
Mean of 11 tracks							2,840	3.9	752	31.3
Mean of 43 days									727	30.3

TEMPERATURE OF THE AIR.

[In degrees Fahrenheit.]

The mean temperature is given for each station in Table II, for voluntary observers. Both the mean temperatures and the departures from the normal are given in Table I for the regular stations of the Weather Bureau, which also gives the height of the thermometers above the ground at each station.

The *monthly mean temperatures* published in Table I, for the regular stations of the Weather Bureau, are the simple means of all the daily maxima and minima; for voluntary stations a variety of methods of computation is necessarily allowed, as shown by the notes appended to Table II.

The *regular diurnal period* in temperature is shown by the hourly means given in Table V for 29 stations selected out of 82 that maintain continuous thermograph records.

The *distribution of the observed monthly mean* temperature of the air over the United States and Canada is shown by the dotted isotherms on Chart IV; the lines are drawn over the Rocky Mountain Plateau region, although the temperatures have not been reduced to sea level, and the isotherms, therefore, relate to the average surface of the country occupied by our observers; such isotherms are controlled largely by the local topography, and should be drawn and studied in connection with a contour map.

The *highest mean temperatures* were: Key West, 72.7; Jupiter, 69.4; Tampa, 65.2; Corpus Christi, 61.4; Jacksonville, 60.0; in Canada, Esquimault, 40.0; Kamloops, 29.2; Port Stanley, 25.0; Toronto, 24.6; Saugeen, 21.7. The lowest were: Williston, 6.3; Bismarck, 6.6; Moorhead, 7.8; Huron, 10.4; Havre, 11.2; in Canada, Prince Albert, —2.4; Battleford, —1.6; Minnedosa, —1.3; Winnipeg, —0.3.

As compared with the normal for February the mean temperature for the current month was in excess over the Lake Region, New England, the Mississippi and Missouri valleys, the northern Plateau and north Pacific Slope. It was deficient in the Southern Plateau and south Pacific Slope, the central Gulf and upper Missouri. The greatest excesses were: In the United States, Idaho Falls, 8.3; Greenbay, 6.2; Duluth, 5.6; Alpena, 5.5; Marquette, 5.4; in Canada, Port Arthur, 5.9; Port Stanley, 5.2; Calgary, 5.1. The largest deficits were: Carson City, 5.5; Port Eads, 4.5; Havre, 3.7; Canada: St. Johns, N. F., 2.4; Charlottetown, 1.1.

Considered by districts the mean temperatures of the current month show departures from the normal as given in Table I. The greatest positive departures were: Upper Lake, 4.2; northern Plateau, 5.4. The greatest negative departures were: Southern Plateau, 1.6; middle Plateau, 3.3.

The years of highest and lowest mean temperatures for February are shown in Table I of the REVIEW for February, 1894. The mean temperature for the current month was the highest on record at: Abilene, 51.8; Baker City, 29.6; Greenbay, 23.2. The mean temperature was the lowest on record only at Carson City, 30.1.

The *maximum and minimum temperatures* of the current month are given in Table I. The highest maxima were: 86, Jupiter (25th); 85, Abilene (17th) and San Antonio (18th); 84, Jacksonville and Corpus Christi (22d); 83, Los Angeles (26th) and Yuma (28th). The lowest maxima were: 32, Williston (frequently); 33, Bismarck (16th) and Moorhead (20th); 34, Duluth (20th); 36, Sault Ste. Marie (3d), St. Paul (13th), and Duluth (20th). The highest minima were: 58, Key West (4th); 46, Jupiter (3d); 39, Tampa (28th); 38, San Francisco (20th), San Diego (22d), and Charleston (28th). The lowest minima were: —30, Moorhead (26th); —25, Williston, Bismarck, and Huron (26th); —22, St. Paul (26th); —21, Minneapolis and Sault Ste. Marie (26th).

The *limits of minimum temperatures*, 32° and 40°, are shown by lines on Chart No. V.

The *years of highest maximum and lowest minimum temperatures* for February are given in the last four columns of Table I of the REVIEW for 1896. During the current month the maximum temperatures were equal to or above the highest on record at: Abilene, 85; Palestine and Fort Smith, 82; Shreveport, 81; Little Rock, 78. The minimum temperatures were equal to or below the lowest on record only at: Carson City, —14.

The *greatest daily range of temperature and the data for computing the extreme and mean monthly ranges* are given for each of the regular Weather Bureau stations in Table I. The

largest values of the greatest daily ranges were: Miles City, 51; Carson City, 48; Pueblo, 47; Havre, Williston, Bismarck, Sioux City, and Northfield, 46. The smallest values were: Tatoosh Island, 12; Point Reyes Light, Nantucket, and Block Island, 14; Key West, 15; East Clallam, 16.

Among the *extreme monthly ranges* the largest were: Carson City, 72; Omaha and Lincoln, 70; Sioux City, 65; Columbus, Mo., 64; Moorhead, Huron, and Pueblo, 63; Des Moines, Springfield, Fort Smith, and Nashville, 62; Dodge City, 61; Rapid City and Springfield, Ill., 60. The smallest values were: Tatoosh Island, 18; Seattle, 20; Point Reyes Light, 22; Pysht, Astoria, and Key West, 24; Port Angeles and Woods Hole, 25; Fort Canby, Block Island, and Nantucket, 26.

Accumulated monthly departures from normal temperatures from January 1 to the end of the current month are given in the second column of the following table, and the average departures are given in the third column for comparison with the departures of current conditions of vegetation from the normal condition.

Districts.	Accumulated departures.		Districts.	Accumulated departures.	
	Total.	Average.		Total.	Average.
	°	°		°	°
New England	+ 1.6	+ 0.8	Middle Atlantic	— 1.7	— 0.8
West Gulf	+ 1.6	+ 0.8	South Atlantic	— 2.8	— 1.4
Lower Lake	+ 0.5	+ 0.2	Florida Peninsula	— 0.5	— 0.2
Upper Lake	+ 6.7	+ 3.4	East Gulf	— 3.3	— 1.6
North Dakota	+ 2.8	+ 1.4	Ohio Valley and Tenn.	— 0.9	— 0.4
Upper Mississippi Valley	+ 3.8	+ 1.9	Southern Plateau	— 1.3	— 0.6
Missouri Valley	+ 7.7	+ 3.8	Middle Plateau	— 0.3	— 0.2
Northern Slope	+ 4.4	+ 2.2	Middle Pacific	— 0.5	— 0.2
Middle Slope	+ 2.8	+ 1.4			
Southern Slope	+ 0.4	+ 0.2			
Northern Plateau	+ 9.6	+ 4.8			
North Pacific	+ 3.0	+ 1.5			
South Pacific	+ 0.4	+ 0.2			

MOISTURE.

The *quantity of moisture* in the atmosphere at any time may be expressed by the weight of the vapor coexisting with the air contained in a cubic foot of space, or by the tension or pressure of the vapor, or by the temperature of the dew-point. The mean dew-point for each station of the Weather Bureau, as deduced from observations made at 8 a. m. and 8 p. m., daily, is given in Table I.

The *rate of evaporation* from a special surface of water on muslin at any moment determines the temperature of the wet-bulb thermometer. The mean wet-bulb temperature is now published in Table I; it is always intermediate, and generally about half way between the temperature of the air and of the dew-point. The quantity of water evaporated from the muslin surface may be considered as depending essentially upon the wet-bulb temperature, the dew-point, and the wind.

The *relative humidity*, or the ratio between the moisture that is present in the air and the moisture that it would contain if saturated at its observed temperature is given in Table I as deduced from the 8 a. m. and 8 p. m. observations. The general average for a whole day or any other interval would properly be obtained from the data given by an evaporometer, but may also be obtained, approximately, from frequent observations of the relative humidity.

PRECIPITATION.

[In inches and hundredths.]

The *distribution of precipitation* for the current month, as determined by reports from about 2,500 stations, is exhibited on Chart III. The numerical details are given in Tables I, II, and III. The total precipitation for the current month exceeded 10 inches on the immediate coast of northern California, Washington, and Oregon, and was between 10 and 20 inches at high stations on the Sierra Nevada. An average of 3 inches fell over New England, and from 4 to 10 inches over the Middle and South Atlantic States. From 8 to 12 inches fell in western Florida and southern Louisiana, Mississippi, and Alabama. The larger for regular stations were: Astoria, 12.89; Eureka, 11.23; Tatoosh Island, 11.16; Pensacola, 10.26; Fort Canby, 10.24. Canada: St. Johns, N. F., 5.85.

Details as to *excessive precipitation* for February are given in Tables XI and XII.

The *years of greatest and least precipitation* for February are given in the REVIEW for February, 1890. The precipitation for the current month was the greatest on record at: Astoria, 12.89; Pensacola, 10.26; Columbia, S. C., 9.11; Augusta, 8.57; Lynchburg, 7.84; Kittyhawk, 7.72; Parkersburg, 7.04; Tampa, 5.40; Jupiter, 5.14; Carson City, 4.30; Salt Lake City, 3.87; Fresno, 2.65; Dodge City, 2.38; Pueblo, 1.47; Williston, 1.10. It was the least on record at: Abilene, 0.02; Corpus Christi, 0.06; San Antonio, 0.15; Palestine, 0.29.

The *diurnal variation*, as shown by tables of hourly means of the total precipitation, deduced from self-registering gauges kept at the regular stations of the Weather Bureau, is not now tabulated.

The *current departures* from the normal precipitation are given in Table I, which shows that precipitation was in excess throughout the South Atlantic and east Gulf States, as well as, to a less extent, over the Rocky Mountain Plateau region. It was decidedly in excess on the Pacific Coast. It was deficient in the Mississippi and lower Missouri valleys and the Lake Region. The large excesses were: Pensacola, 6.4; Savannah, 5.8; Astoria, 5.2; Eureka, 5.1; Columbia, S. C., 4.9; in Canada, Port Stanley, 0.3; Swift Current and Qu'Appelle, 0.1. The large deficits were: Shreveport, 3.7; Little Rock, 3.6; Fort Smith, 3.2; in Canada, Yarmouth, 3.5; Charlottetown, 2.1; Quebec, 1.4.

The *average departure* for each district is given in Table I. By dividing each current precipitation by its respective normal the following corresponding percentages are obtained (precipitation is in excess when the percentage of the normal exceeds 100):

Above the normal: Middle Atlantic, 121; south Atlantic, 188; Florida Peninsula, 163; east Gulf, 127; Ohio Valley and Tennessee, 114; North Dakota, 215; northern Slope, 138; middle Slope, 162; middle Plateau, 240; northern Plateau, 134; north Pacific, 122; middle Pacific, 151; south Pacific, 169.

Below the normal: New England, 64; west Gulf, 22; lower Lake, 60; upper Lake, 80; upper Mississippi, 84; Missouri Valley, 86; southern Slope, 25; southern Plateau, 67.

The *total accumulated monthly departures* from January 1 to the end of the current month are given in the second column of the following table: The third column gives the percentage of the current accumulated precipitation relative to its normal value.

Districts.	Accumulated departures.	Accumulated precipitation.	Districts.	Accumulated departures.	Accumulated precipitation.
	Inches.	*Per ct.*		*Inches.*	*Per ct.*
South Atlantic	+ 1.00	113	New England	— 1.70	78
Florida Peninsula	+ 0.70	110	Middle Atlantic	— 1.00	88
North Dakota	+ 1.00	172	East Gulf	— 0.60	94
Upper Mississippi Valley	+ 1.50	142	West Gulf	— 1.60	77
Missouri Valley	+ 1.50	200	Ohio Valley and Tenn.	— 0.90	89
Middle Slope	+ 0.60	136	Lower Lake	— 1.10	80
Southern Plateau	+ 1.30	213	Upper Lake	— 1.10	82
Middle Plateau	+ 1.20	140	Northern Plateau	— 0.40	90
South Pacific	+ 2.30	154	North Pacific	— 0.70	95
Northern Slope	0.00	100	Middle Pacific	— 0.50	95
Abilene (southern Slope)	0.00	100			